

AMENDMENTS TO CLAIMS

Claims 1-2, 4-8, 11-15, 18-30, 32-34 and 36-41 are amended, and claims 17 is being canceled, as shown below. All pending claims are reproduced below, including those that remain unchanged.

1. (Currently Amended): An ion generator comprising:
an ion emitter a first electrode;
a collector second electrode; and
a voltage generator to provide a voltage potential difference between the ion emitter first electrode and the collector second electrode in order, when energized, to create a flow of air in a downstream direction from the ion emitter first electrode to the collector second electrode;
wherein there is no further electrode located between the ion emitting electrode and the
collector electrode; and
wherein the ion emitter electrode ~~said first electrode~~ is one of (1) slack, (2) curved, and (3) coiled and spans a distance, and wherein the ion emitter ~~said first~~ electrode has a length that is at least fifteen percent greater than said distance.

2. (Currently Amended): An ion generator comprising:
an ion emitter a first electrode;
a collector second electrode;
a voltage generator to provide a voltage potential difference between the ion emitter first electrode and the collector second electrode in order, when energized, to create a flow of air in a downstream direction from the ion emitter first electrode to the collector second electrode;

wherein there is no further electrode located between the ion emitting electrode and the collector electrode; and

wherein said ion emitter first electrode is slack and spans a distance, and wherein said ion emitter first electrode has a length that is at least fifteen percent greater than said distance.

3. (Canceled)

4. (Currently Amended): The ion generator of claim 2 wherein said length of said ion emitter first electrode is between fifteen percent to thirty percent greater than said distance.

5. (Currently Amended): An ion generator comprising:

an ion emitter a first electrode;

a collector second electrode; and

a voltage generator to provide a voltage potential difference between the ion emitter first electrode and the collector second electrode in order, when energized, to create a flow of air in a downstream direction from the ion emitter first electrode to the collector second electrode;

wherein there is no further electrode located between the ion emitting electrode and the collector electrode; and

wherein said ion emitter first electrode is a coil and spans a distance, and wherein said ion emitter first electrode has a length that is at least fifteen percent greater than said distance.

6. (Currently Amended): The ion generator of claim 5 wherein said ion emitter first electrode is at least two times longer than said distance.

7. (Currently Amended): The ion generator of claim 5 wherein said ion emitter ~~first~~ electrode is between two to three times longer than said distance.

8. (Currently Amended): An ion generator comprising:

an ion emitter ~~a~~ ~~first~~ electrode;

a collector ~~second~~ electrode; and

a voltage generator to provide a voltage potential difference between the ion emitter ~~first~~ electrode and the collector ~~second~~ electrode in order, when energized, to create a flow of air in a downstream direction from the ion emitter ~~first~~ electrode to the collector ~~second~~ electrode;

wherein there is no further electrode located between the ion emitting electrode and the collector electrode; and

wherein said ion emitter ~~first~~ electrode has a plurality of curves and spans a distance, and wherein said ion emitter ~~first~~ electrode has a length that is at least fifteen percent greater than said distance.

9. (Original): The generator of claim 8 wherein said plurality of curves are in the same plane.

10. (Canceled)

11. (Currently Amended): An ion generator comprising:

a first means for emitting ions providing an electrode having a length that is at least fifteen percent greater than a distance that the electrode means spans;

a collector second electrode; and

a voltage generator to provide a potential difference between the means for emitting ions first electrode and the collector second electrode in order, when energized, to create a flow of air in a downstream direction from the means for emitting ions first electrode to the collector second electrode.

12. (Currently Amended): In an ion generator comprising a ion emitter first electrode that spans a distance and a collector second electrode, and a voltage generator to provide a voltage potential difference between the ion emitter first electrode and the collector second electrode in order, when energized, to create a flow of air in a downstream direction from the ion emitter first electrode to the collector second electrode, the improvement including:

 said ion emitter first electrode being slack so that its length is at least fifteen percent greater than said distance that said ion emitter first electrode spans, in order to enhance emissivity.

13. (Currently Amended): In an ion generator comprising an ion emitter a first electrode that spans a distance and a collector second electrode, and a voltage generator to provide a voltage potential difference between the ion emitter first electrode and the collector second electrode in order, when energized, to create a flow of air in a downstream direction from the ion emitter first electrode to the collector second electrode, the improvement including:

said ion emitter ~~first~~ electrode including a plurality of curves that cause its length to be at least fifteen percent greater than said distance in order to enhance emissivity.

14. (Currently Amended): In an ion generator comprising an ion emitter ~~a~~ ~~first~~ electrode that spans a distance and a collector ~~second~~ electrode, and a voltage generator to provide a voltage potential difference between the ion emitter ~~first~~ electrode and the collector ~~second~~ electrode in order, when energized, to create a flow of air in a downstream direction from the ion emitter ~~first~~ electrode to the collector ~~second~~ electrode, the improvement including:

said ion emitter ~~first~~ electrode being coiled so that its length is at least fifteen percent greater than the distance that said ion emitter ~~first~~ electrode spans, in order to enhance emissivity.

15. (Currently Amended): A method for generating ions including the steps of:

providing an ion emitter ~~a~~ ~~first~~ electrode that is sufficiently slack, curved or coiled such that its length is at least fifteen percent greater than a distance that said ion emitter ~~first~~ electrode spans;

providing a collector ~~second~~ electrode; and

providing a voltage generator to provide a potential difference between the ion emitter ~~first~~ electrode and the collector ~~second~~ electrode in order, when energized, to create a flow of air in a downstream direction from the ion emitter ~~first~~ electrode to the collector ~~second~~ electrode.

16. (Canceled)

17. (Canceled):

18. (Currently Amended): The generator of claim 1 wherein said ion emitter ~~first~~ electrode is positively charged and the collector ~~second~~ electrode is negatively charged.

19. (Currently Amended): The method of claim 15, including providing said ion emitter ~~first~~ electrode such that its said length is between two to three times longer than said distance.

20. (Currently Amended): A device for conditioning air including
a housing with an air inlet and an air outlet;
an ion emitter ~~a~~ ~~first~~ electrode;
a collector ~~second~~ electrode;
said ion emitter ~~first~~ electrode located closer to said air inlet than said collector ~~second~~ electrode;
said collector ~~second~~ electrode located closer to said air outlet than said ion emitter ~~first~~ electrode; and
a potential generator electrically coupled to the ion emitter ~~first~~ electrode and the collector ~~second~~ electrode in order, when energized, to create a flow of air in a downstream direction from the ion emitter ~~first~~ electrode to the collector ~~second~~ electrode; and
wherein said ion emitter ~~first~~ electrode spans a distance, and wherein said ion emitter ~~first~~ electrode is sufficiently slack, curved or coiled such that its length is at least fifteen percent greater than said distance.

21. (Currently Amended): A device for conditioning air including
a housing with an air inlet and an air outlet
a ~~first~~ means for emitting ions ~~providing a~~ ~~first~~ electrode having a length that is at least
fifteen percent greater than a distance that the ~~means~~ ~~first~~ electrode spans;
a collector ~~second~~ electrode;
said means for emitting ions is ~~first~~ electrode located closer to said air inlet than ~~is~~ said
collector ~~second~~ electrode;
said collector ~~second~~ electrode located closer to said air outlet than ~~is~~ said means for
emitting ions ~~first~~ electrode; and
a potential generator electrically coupled to the means for emitting ions ~~first~~ electrode
and the collector ~~second~~ electrode in order, when energized, to create a flow of air in a
downstream direction from the means for emitting ions ~~first~~ electrode to the collector ~~second~~
electrode.

22. (Currently Amended): The generator of claim 1 wherein when said voltage generator is
energized, ions are generated at said means for emitting ions ~~first~~ electrode and directed toward
said collector ~~second~~ electrode.

23. (Currently Amended): The ion generator of claim 1 wherein said collector ~~second~~
electrode is removable by a user for cleaning.

24. (Currently Amended): The generator of claim 1 wherein said generator is incorporated in
a housing, and said housing comprises an electro-kinetic air transporter-conditioner.

25. (Currently Amended): The generator of claim 1 wherein said generator is incorporated in a housing and, said housing comprises an electro-kinetic air transporter-conditioner and said housing has a top and said collector ~~second~~ electrode is removable from said top for cleaning.

26. (Currently Amended): The generator of claim 1 wherein:
said generator is incorporated in an elongated freestanding housing with a top, and said housing comprises an electro-kinetic air transporter-conditioner; and
wherein said collector ~~second~~ electrode is elongated and is removable from said top of said housing.

27. (Currently Amended): The generator of claim 1 wherein:
said generator is incorporated in an elongated housing with a top and, said housing comprises an electro-kinetic air transporter-conditioner; and
wherein said collector ~~second~~ electrode is elongated and is at least partially removable from said top of said housing.

28. (Currently Amended): The generator of claim 1 wherein:
said generator is incorporated in an elongated freestanding housing with a top, and said housing comprises an electro-kinetic air transporter-conditioner; and
wherein said collector ~~second~~ electrode is elongated and is telescopingly removable through said top of said housing.

29. (Currently Amended): A device for conditioning air, comprising:

 a housing having an inlet and an outlet;

 an ion generator disposed within said housing, that creates an airflow in a downstream direction, when energized, from said inlet to said outlet, including:

 an ion emitter ~~a first~~ electrode that spans a distance within said housing, said ion emitter ~~first~~ electrode created from a wire-shaped element, and formed into a coil-shape such that a length of said ion emitter electrode is at least fifteen percent greater than said distance;

 a collector ~~second~~ electrode located downstream of said ion emitter ~~first~~ electrode;

 a high voltage generator electrically coupled to said ion emitter ~~first~~ and collector ~~second~~ electrode.

30. (Currently Amended): The device as recited in claim 29, wherein said wire-shaped element has a length two to three times greater than said distance that said ion emitter ~~first~~ electrode spans.

31. (Original): The device as recited in claim 29, wherein the diameter of said coil-shape is approximately ten times greater than the diameter of said wire-shaped element.

32. (Currently Amended): The device as recited in claim 29, wherein said ion emitter ~~first~~ electrode is an ion emitting surface, that can electrically charge particles contained within the airflow.

33. (Currently Amended): The device as recited in claim 29, wherein said collector second electrode has a polarity opposite of said ion emitter first electrode, which collector second electrode collects the electrically charged particles.

34. (Currently Amended): A device for conditioning air, comprising:

a housing having an inlet and an outlet;

an ion generator disposed within said housing, that creates an airflow in a downstream direction, when energized, from said inlet to said outlet, including:

an ion emitter a-first electrode that spans a distance within said housing, said ion emitter first electrode created from a wire shaped element, and formed into a curved configuration such that a length of said ion emitter electrode is at least fifteen percent greater than said distance;

a collector second electrode located downstream of said first electrode;

a high voltage generator electrically coupled to said ion emitter first and collector second electrode.

35. (Canceled):

36. (Currently Amended): The device as recited in claim 34, wherein said ion emitter first electrode is an ion emitting surface that can electrically charge particles contained within the airflow.

37. (Currently Amended): The device of claim 21 wherein said housing has as top and said collector second electrode is removable through said top.

38. (Currently Amended): The device of claim 21 wherein said housing is an elongated freestanding housing with a top and said collector second electrode is removable through said top of said housing.

39. (Currently Amended): The device of claim 21 wherein said housing is an elongated housing with a top and said collector second electrode is removable through said top of said housing.

40. (Currently Amended): The device as recited in claim 36, wherein said collector second electrode has a polarity opposite of said ion emitter first electrode, which collector second electrode can collect the electrically charged particles.

41. (Currently Amended): An ion generator comprising:
an ion emitter a first electrode that spans a distance;
at least two collector second electrodes that each include a substantially flat surface, each substantially flat surface being substantially parallel to one another; and
a voltage generator to provide a potential difference between said ion emitter first electrode and said collector second electrodes;
wherein said ion emitter first electrode has a plurality of curves that cause a length of said ion emitter first electrode to be longer than said distance, said plurality of curves being in a same

plane, said plane being parallel to said substantially flat surfaces of said collector second electrodes.